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HUNTSMAN INTERNATIONAL, LLC			EXAMINER	
LEGAL DEPARTMENT			COONEY, JOHN M	
10003 WOODLOCH FOREST DRIVE				
THE WOODLANDS, TX 77380			ART UNIT	PAPER NUMBER
			1796	
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			08/20/2010	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/772,903	<b>Applicant(s)</b> JOERN ET AL.
	<b>Examiner</b> John Cooney	<b>Art Unit</b> 1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 28 May 2010.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-4,9,11,18,19,22-24,26,28,30,31,33,35 and 36 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-4,9,11,18,19,22-24,26,28,30,31,33,35 and 36 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

Applicant's arguments filed 5-28-10 have been fully considered but they are not persuasive.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4, 9, 11, 18, 19, 22-24, 26, 28, 30, 31, 33, 35 and 36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants' now claimed ranges of flame spread values are not supported by the evidence of record, including Tables 1-3 of the examples, in that the representation of the exemplified embodiments are not representative of the ranges of encompassed materials encompassed by the claims or the ranges of flame spread values encompassed by the now claimed range of values of the claims. The exemplified flame spread values for specific compositions of the examples are not representative of the range of values for the range of compositions encompassed by the claims. Further, there is no support for the claimed endpoint "not more than about 13".

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, 9, 11, 18, 19, 22-24, 26, 28, 30, 31, 33, 35 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims are confusing as to intent because the conditions under which the flame spread values of the claims are determined are not set forth. There is not a universally understood standard for determining Flame Spread in systems of the instant concern such that the conditions used in determining the values of applicants' claims may be viewed as being implied. Claims are confusing as to intent because the intended metes and bound of applicants' claims can not be determined.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 9, 11, 18, 19, 22-24, 26, 28, 30, 31, 33, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sieker et al.(6,403,665) in view of Bodnar et al.(5,143,945).{all references have been previously cited}.

Sieker et al. discloses preparations of rigid polyurethane or urethane-modified polyisocyanurate foams prepared by reacting isocyanates and isocyanate reactive

materials, including polyester polyols in elevated amounts as claimed, at isocyanate indexes inclusive of those claimed, in the presence of blowing agents reading on those claimed, urethane catalysts, and functionalized carboxylic acids as claimed (see column 1 line 3 – column 7 line 63 and the examples, as well as, the entire document). The pKa in water values are values associated with the selection of the functionalized carboxylic acid and are not seen to be associated with difference in the claims in the patentable sense.

Sieker et al. differs from applicants' claims in that alkali metal salt trimerization catalysts as claimed are not particularly required and amounts of inclusion when chosen are not specified (see again column 5 lines 52-63). However, Bodnar et al. (see column 8 line 32 - column 9 line 36) discloses employment of these catalysts, including a preference for potassium 2-ethylhexanoate (column 9 lines 8-9), in polyurethane-polyisocyanurate foam systems for the purpose of ensuring the trimerization of excess isocyanate groups to isocyanurate linkages. Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the trimerization catalysts of Bodnar et al. in the preparations of Sieker et al. in amounts as provided for by Bodnar et al. for the purpose of ensuring the trimerization of excess isocyanate groups to isocyanurate linkages during product formation in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

As to differences in the overlaps of amounts of the involved materials of the instant concern, it has long been held that where the general conditions of the claims

are disclosed in the prior art, discovering the optimal or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Reese* 129 USPQ 402 . Further, a *prima facie* case of obviousness has been held to exist where the proportions of a reference are close enough to those of the claims to lead to an expectation of similar properties. *Titanium Metals v Banner* 227 USPQ 773. (see also MPEP 2144.05 I) Similarly, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272,205 USPQ 215 (CCPA 1980).

As to applicants' recently inserted range of flame spread values, it is held that such is a characteristic associated with the materials involved in the formation of the preparations of the instant concern, and, accordingly, these values of applicants' claims are intrinsic features associated with the products arising from the work-ups provided for by the teachings and fair suggestions of the combined prior art.

When looking to showings of results in order to overcome a rejection, the following must be considered:

**Results Must be Unexpected:**

Unexpected properties must be more significant than expected properties to rebut a *prima facie* case of obviousness. *In re Nolan* 193 USPQ 641 CCPA 1977.

Obviousness does not require absolute predictability. *In re Miegel* 159 USPQ 716.

Since unexpected results are by definition unpredictable, evidence presented in comparative showings must be clear and convincing. *In re Lohr* 137 USPQ 548.

In determining patentability, the weight of the actual evidence of unobviousness presented must be balanced against the weight of obviousness of record. *In re Chupp*, 2 USPQ 2d 1437; *In re Murch* 175 USPQ 89; *In re Beattie*, 24 USPQ 2d 1040.

**Claims Must be Commensurate With Showings:**

Evidence of superiority must pertain to the full extent of the subject matter being claimed. *In re Ackerman*, 170 USPQ 340; *In re Chupp*, 2 USPQ 2d 1437; *In re Murch* 175 USPQ 89; *Ex Parte A*, 17 USPQ 2d 1719; accordingly, it has been held that to overcome a reasonable case of *prima facie* obviousness a given claim must be commensurate in scope with any showing of unexpected results. *In re Greenfield*, 197 USPQ 227. Further, a limited showing of criticality is insufficient to support a broadly claimed range. *In re Lemin*, 161 USPQ 288. See also *In re Kulling*, 14 USPQ 2d 1056.

**Result Must Compare to Closest Prior Art:**

Where a definite comparative standard may be used, the comparison must relate to the prior art embodiment relied upon and not other prior art – *Blanchard v. Ooms*, 68 USPQ 314 – and must be with a disclosure identical (not similar) with that of said embodiment: *In re Tatincloux*, 108 USPQ 125.

Applicants' have not persuasively demonstrated unexpected results for the combinations of their claims. Comparisons have not been made with the prior art embodiment relied upon. Applicants have not demonstrated their results to be unexpected and more than mere optimizations of the knowledge in the art or more significant than being secondary in nature. Applicants' have not demonstrated their showing to be commensurate in scope with the scope of combinations now claimed.

Applicant's arguments have been considered. However, rejection is maintained.

The new ranges of flame spread values set forth by applicants are addressed in the rejection above. It is held and maintained that these ranges of values are intrinsic to the preparations arising from the combination of teachings set forth above, and applicants have not demonstrated difference in a patentable sense over the preponderance of evidence, including beneficial flame and fire properties, provided for by the combined teachings of the above cited prior art.

As to applicants' arguments directed towards the secondary teaching, it has long been held that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642

F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Bodnar et al. is looked to for the address of the deficiencies of Sieker et al. indicated in the rejection above. It is not looked to for its teaching of the features provided for by Bodnar et al.

The following rejection previously set forth in the Office action mailed 6-15-09 {without an additional reliance on Fishback et al.} is seen to be appropriately reinstated herein in light of applicants' reinsertion of OH functional groups into the claims:

Claims 1-4, 9, 11, 18, 19, 22-24, 26, 28, 30, 31, 33, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodnar et al.(5,143,945) in view of Scherbel et al.(5,688,835).

Bodnar et al. discloses preparations of polyisocyanurate based foams prepared by reacting isocyanates and isocyanate reactive materials, including polyester polyols in elevated amounts as claimed, at isocyanate indexes as claimed in the presence of blowing agents reading on those claimed, alkali metal salt trimerization catalysts in amounts as claimed, and functionalized and non-functionalized carboxylic acids, wherein the disclosed preparations read on the methods and products of applicants' claims (see examples, as well as, the entire document).

The pKa in water values are values associated with the selection of carboxylic acid and are held to be intrinsic features of the teachings of Bodnar et al.

Bodnar et al. differs from applicants' claims as to the specific amounts and selection of catalysts for the function of trimerization and urethanization. However, Bodnar et al. discloses selection of catalysts in overlap with those of applicants' claims and disclosure for the purpose of imparting their catalyzing effect, including the role of trimerization and urethanization catalysis and the dual role of both (see column 8 line 32-column 9 line 45). Accordingly, it would have been obvious for one having ordinary skill in the art to have employed catalysts within the teachings of Bodnar et al. for the purpose of controlling trimerization and urethanization effects during product formation in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Further, though selection of amounts are not exact between Bodnar et al. and applicants' claims, it has long been held that where the general conditions of the claims are disclosed in the prior art, discovering the optimal or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233; *In re Reese* 129 USPQ 402 . Further, a *prima facie* case of obviousness has been held to exist where the proportions of a reference are close enough to those of the claims to lead to an expectation of similar properties. *Titanium Metals v Banner* 227 USPQ 773. (see also MPEP 2144.05 I)

Similarly, it has been held that discovering the optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272,205 USPQ 215 (CCPA 1980).

Bodnar et al. differs from claim 31 in that water is not particularly required. However, Bodnar et al. is clear as to employment of water being a preferred

embodiment of their invention for the purposes of imparting the foaming effect. Accordingly, it would have been obvious for one having ordinary skill in the art to have employed water as the blowing agent of Bodnar et al. for the purpose of imparting the foaming effect in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Applicants' claims differ from Bodnar et al. in that hydrocarbons are not particularly employed. However, Scherbel et al. discloses hydrocarbons to be replacement blowing agents for halofluorocarbons in rigid foam applications (see column 1 lines 40-65). Accordingly, it would have been obvious for one having ordinary skill in the art to have replaced the halocarbons of Bodnar et al. with the hydrocarbons of Scherbel et al. for the purpose of imparting the foaming effect with environmentally advantageous results in order to arrive at the products and processes of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. In addition to Scherbel et al.'s disclosure of specific selections of hydrocarbons falling within the group of compounds identified by applicants' claims, it is held that the selection of C4-C8 hydrocarbons are of the most readily envisioned selections of hydrocarbons from Scherbel et al.'s generic disclosure, and distinction based on this further aspect of applicants' claims.

As to applicants' recently inserted range of flame spread values, it is held that such is a characteristic associated with the materials involved in the formation of the preparations of the instant concern, and, accordingly, these values of applicants' claims

are intrinsic features associated with the products arising from the work-ups provided for by the teachings and fair suggestions of the combined prior art.

The following previous arguments are maintained to be still applicable:

Applicant's latest arguments have been considered. However, rejection is maintained.

As to applicants' arguments directed towards the deficiencies of the combined teaching, it is held that the claims as the currently stand would be properly arrived at from the teachings and fair suggestions of the cited prior art. One more concerned with environmental concerns rather than price, insulation, and compatibility would look to the substitution of alkanes of Scherbel et al. for the haloalkanes of Bodnar et al. with the expectation of success in the absence of a showing of new or unexpected results attributed to differences in applicants' claims that are commensurate in scope with the claims as they currently stand. At this time, no sufficient showing of new or unexpected results has been made.

The following is also seen to be applicable to this rejection:

The new ranges of flame spread values set forth by applicants are addressed in the rejection above. It is held and maintained that these ranges of values are intrinsic to the preparations arising from the combination of teachings set forth above, and applicants have not demonstrated difference in a patentable sense over the preponderance of evidence, including beneficial flame and fire properties, provided for by the combined teachings of the above cited prior art.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Cooney whose telephone number is 571-272-1070. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John Cooney/

Primary Examiner, Art Unit 1796